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EXAMINER
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ART UNIT	PAPER NUMBER
2186	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/596,155	SO ET AL.	
	Examiner	Art Unit	
	CHRISTOPHER BIRKHIMER	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-7,9 and 14-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7,9 and 14-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The current Office Action is in response to the Amendment submitted 05/20/2011. The Examiner acknowledges the amendments to claims 1, 5 – 6, and 9 along with the addition of claims 16 – 25 and the cancellation of claims 4, 8, and 10 – 13. Claims 1 – 3, 5 – 7, 9, and 14 – 25 are pending in the case.

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claims 1, 6, 16, and 21 contain the limitation of a class of the information recording medium. This limitation does not have proper antecedent basis in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first and second paragraphs of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
>
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims **1 – 3, 5, 14, and 16 - 20** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites the limitation of the information includes a class of the information recording medium. There is no mention of the class of the information recording medium in the original claims, specification, or drawings. The class of the information recording medium is new matter.

Claim 6 recites the limitation of the information includes a class of the information recording medium. There is no mention of the class of the information recording medium in the original claims, specification, or drawings. The class of the information recording medium is new matter.

Claim 16 recites the limitation of the information includes a class of the information recording medium. There is no mention of the class of the information recording medium in the original claims, specification, or drawings. The class of the information recording medium is new matter.

Claim 21 recites the limitation of the information includes a class of the information recording medium. There is no mention of the class of the information recording medium in the original claims, specification, or drawings. The class of the information recording medium is new matter.

Claims 2 – 3, 5 – 7, 9, 14 – 15, 17 – 20, and 22 – 25 are rejected for being dependent on a rejected base claim.

4. Claim **25** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 25 recites the limitation "data processor" in lines 1 - 2. There is no previous mention of a data processor in the claim or any bade claim. There is insufficient antecedent basis for this limitation in the claim. The Examiner is assuming the data process in claim 25 is meant to refer to the data processing apparatus in line 1 of claim 6.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims **1 – 3, 5 – 7, 9, 14 - 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art hereinafter known as AAPA in view of Wells et al. (Pat 5,535,369) in view of Stoppani, JR. (Pat 5,287,500).

With regard to **claim 1**, AAPA teaches a method for recording data **[Specification, Page 1, Lines 15 – 19]** to a free area of a recording area **[Specification, Page 1, Lines 15 – 19, This shows a media for recording different kinds of data. It is implied that the area the data is recorded is free or else the data could not be recorded]** of an information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]**, the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]** having the recording area for storing data which is managed by a file system **[Specification, Page 1, Line 33; Specification, Page 2, Line 2]**, wherein

the recording area of the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]** is managed in units of blocks **[Specification, Page 2, Lines 8 – 9]**, and each of the blocks includes at least two clusters as units for storing data for the file system **[Specification, Page 2, Lines 14 – 18, This shows the blocks memory is divided into a number of clusters that are between 1 - N where N is an integer. The limitation of two clusters is included in the range of 1 - N clusters since two is an integer]**.

However, AAPA does not specifically disclose the limitation of searching the blocks for a valid block, the valid block having at least a predetermined threshold number of unused clusters, determining the valid block from the searched blocks, and

writing the data in the determined valid block prior to writing the data in the searched blocks having less then the predetermined threshold number of unused memory, acquiring information about the predetermined threshold number of unused clusters from the information recording medium memory, the information acquired from the information recording medium indicating information for determining the predetermined threshold number of unused clusters necessary to write the data at least at a predetermined minimum speed, the information being acquired from the information recording medium before searching the blocks for the valid block and before writing the data in the determined valid block, and the information includes at least one of a class of the information recording medium, a number of clusters of each of the searched blocks, a number of used clusters of each of the searched blocks, and a size of the searched blocks.

Wells discloses the limitation of searching the blocks for a valid block, the valid block having at least a predetermined threshold of unused memory **[Column 15, Lines 48 – 60, This shows searching for a block with enough free]**, determining the valid block from the searched blocks, and writing the data in the determined valid block prior to writing the data in the searched blocks having less then the predetermined threshold number of unused memory **[Column 18, Lines 44 – 67; Column 19, Lines 1 – 22, This shows the process of storing data in a block that has enough memory before storing it in a block that does not have enough free memory]**, acquiring information about the predetermined threshold number of free space from the information recording medium memory, the information acquired from the information recording medium

indicating information for determining a predetermined threshold number of unused memory necessary to write the data at least at a predetermined minimum speed **[Fig 3; Column 15, Lines 48 – 60, This shows the system determining if there is enough space in the memory as a whole and then a given block to store data. Figure 3 shows that the data is stored in 16 bit chunks. This shows that the system knows the memory sections are 16 bits wide and uses that information to determine if there is enough space to store the data at a speed that allows writing of the data]**, the information being acquired before searching the blocks for the valid block and before writing the data in the determined valid block **[Fig 3; Column 15, Lines 48 – 60, The size of the sections of memory needs to be known before it is known if a section of memory has enough free space to store the desired data]**, and the information includes at least one of a class of the information recording medium **[Column 16, Line 15 through Column 17, Line 3, The different warning levels indicate a current class of the information recording medium. The "FLASH Warn 1" and "FLASH Warn 2" state indicates the memory is a class of memory that currently has enough reserves to write data at a minimum speed to store data. The "standby" state indicates the memory is currently a class of memory that does not have enough reserves and data is not written at a minimum speed]**, a capacity of each of the searched blocks **[Column 15, Lines 48 – 60, Searching for a block with enough free memory to store data is determining a number of clusters in a block that can store data]**, a number of used space of each of the searched blocks **[Column 15, Lines 48 – 60, Searching for a block with enough space to**

store data indicates the number of used and unused clusters in the block are determined to see if there are enough unused or free clusters in a block to store data], and a size of the searched blocks **[Column 15, Lines 48 – 60, Searching the blocks for enough space to store data indicates the size of clusters in the blocks are searched and then used in a mathematical equation to determine the total amount of used and unused space in the block and the memory as a whole]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Wells in AAPA, because it increases data coherency **[Column 35, Lines 60 - 67; Column 36, Lines 1 - 4]**.

However, AAPA in view of Wells does not specifically disclose the limitation of a number of unused clusters.

Stoppani discloses a number of unused clusters **[Column 6, Lines 25 – 43]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Stoppani in AAPA in view of Wells, because it ensures that sufficient available space is present on storage device to store additional files **[Column 6, Lines 44 – 47]** and it provides a method for Wells to perform the searching and determining of a valid block.

With regard to **claim 2**, AAPA discloses storing data in clusters **[Specification, Page 2, Lines 1 – 13, This shows the memory of a block is divided into clusters]**.

Wells discloses data are written in unused memory in the valid block **[Column 18, Lines 44 – 67; Column 19, Lines 1 – 22, This shows the process of storing data**

in a block that is valid because it has enough free memory to store the desired data].

With regard to **claim 3**, AAPA discloses a storage medium divided into blocks where the memory of the blocks is divided into clusters **[Specification, Page 2, Lines 1 – 13]**.

Wells discloses determining a valid block **[Column 18, Lines 44 – 67; Column 19, Lines 1 – 22, This shows the process of storing data in a block that has enough memory before storing it in a block that does not have enough free memory]** and searching for a valid block **[Column 15, Lines 48 – 60, This shows searching for a block with enough free memory]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Wells in AAPA, because it increases data coherency **[Column 35, Lines 60 - 67; Column 36, Lines 1 - 4]**.

Stoppani discloses counting unused clusters **[Column 6, Lines 41 – 43]**, determining a valid block on the basis of the counting result **[Column 6, Lines 25 – 43, This shows each record contains count data and the record is used to find valid areas in memory]**, generating and holding a valid free area list **["free space table", Column 6, Lines 25 – 28]** which is list information related to the valid block, and searching for a valid block by referring to the valid free area list at data recording process **[Column 6, Lines 25 – 43, This shows searching the table to find a valid location based on clusters to store data]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Stoppani in AAPA in view of Wells, because it ensures that sufficient available space is present on storage device to store additional files **[Column 6, Lines 44 – 47]** and it provides a method for Wells to perform the searching and determining of a valid block.

With regard to **claim 5**, AAPA teaches a block of storage is divided into smaller clusters **[Specification, Page 2, Lines 1 - 13]**.

Wells discloses the predetermined threshold number of free space is a value at least one-half of the amount of memory in each block **[Column 15, Lines 48 – 60; Column 18, Lines 44 – 67; Column 19, Lines 1 – 22, This shows the search and determination of free memory in a block is based on the amount of data that is to be written in the memory. At times the data to be written will be equal to the storage in at least one-half of the number of clusters in each block and at other times it will be less then one-half of the number of clusters in each block. There is no limitation that the predetermined number is always a value at least one-half of the number of clusters included in each block]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Wells in AAPA, because it increases data coherency **[Column 35, Lines 60 - 67; Column 36, Lines 1 - 4]**.

Stoppani discloses deciding memory space based on a number of unused clusters **[Column 6, Lines 25 – 43]**.

With regard to **claim 6**, AAPA teaches a data processing apparatus **[Specification, Pages 1 – 2, The Applicant discloses writing data to a memory device which implies there is an data processing apparatus]** for writing or reading data **[Specification, Page 1, Lines 15 – 17]** to or from an information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]**, wherein

a recording area of the information recording medium **[Specification, Page 1, Line 33; Specification, Page 2, Line 2]** is managed in units of blocks **[Specification, Page 2, Lines 8 – 9]**, each of the blocks **[Specification, Page 2, Lines 8 – 9]** includes at least two clusters **[Specification, Page 2, Lines 14 – 18, This shows the blocks memory is divided into a number of clusters that are between 1 - N where N is an integer. The limitation of two clusters is included in the range of 1 - N clusters since two is an integer]**, and the clusters are units for storing data for a file system **[Specification, Page 2, Lines 14 – 18]**;

the data processing apparatus **[Specification, Pages 1 – 2, The Applicant discloses writing data to a memory device which implies there is an apparatus to perform the writing]** comprises:

an I/O processor that processes input and output of information for the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25, It is implied there is an I/O processor associated with the information recording medium in order to save to and read from the information recording medium]**;

a file system controller **[Specification, Page 2, Lines 1 – 7]** that manages data stored in the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]**, as a file;

a data processor that controls writing and reading of data to and from the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25, It is implied there is a data processor associated with the information recording medium in order to save to and read from the information recording medium]**;

a valid free area manager that manages, by units of blocks, information for the blocks **[Specification, Page 2, Lines 1 – 13, This shows the access units of the file system are the same as blocks]**.

However, AAPA does not specifically disclose the limitation of a valid free area manager that manages information for the blocks containing at least a predetermined threshold number of unused clusters in an area of the information recording medium, when necessary to record data to a new free area, the data processor, as a control, searches for a valid block from the managed blocks with reference to the information held in the valid free area manager, and writes data to the searched valid block prior to writing data to another one of the managed blocks, acquiring information about the predetermined threshold number of unused clusters from the information recording medium memory, the information acquired from the information recording medium indicates information for determining the predetermined threshold number of unused clusters necessary to write the data at least at a predetermined minimum speed, the information being acquired from the information recording medium before searching the

blocks for the valid block and before writing the data in the determined valid block, and the information includes at least one of a class of the information recording medium, a number of clusters of each of the searched blocks, a number of used clusters of each of the searched blocks, and a size of each of the searched blocks..

Wells discloses when necessary to record data to a new free area, the data processor, as a control, searches for a valid block from the managed blocks and writes data to the searched valid block prior to writing data to another one of the managed blocks **[Column 18, Lines 44 – 67; Column 19, Lines 1 – 22, This shows when data is recorded to a free area the blocks in the memory are first searched and then the information about the searched blocks is analyzed to determine if there is a block to store the data. A valid block is a block with enough free memory to store the data. If one of the blocks is a valid block the data is written into the valid block. If none of the blocks are a valid block an erase operation is performed to empty a block and then the data is written into the previously invalid block]**, information about the predetermined threshold number of free space is acquired from the information recording medium, the information acquired from the information recording medium indicating information for determining a predetermined threshold number of unused memory necessary to write the data at least at a predetermined minimum speed **[Fig 3; Column 15, Lines 48 – 60, This shows the system determining if there is enough space in the memory as a whole and then a given block to store data. Figure 3 shows that the data is stored in 16 bit chunks. This shows that the system knows the memory sections are 16 bits wide and uses that**

information to determine if there is enough space to store the data at a speed that allows writing of the data], the information being acquired before searching the blocks for the valid block and before writing the data in the determined valid block **[Fig 3; Column 15, Lines 48 – 60, The size of the sections of memory needs to be known before it is known if a section of memory has enough free space to store the desired data]**, and the information includes at least one of a class of the information recording medium **[Column 16, Line 15 through Column 17, Line 3, The different warning levels indicate a current class of the information recording medium. The "FLASH Warn 1" and "FLASH Warn 2" state indicates the memory is a class of memory that currently has enough reserves to write data at a minimum speed to store data. The "standby" state indicates the memory is currently a class of memory that does not have enough reserves and data is not written at a minimum speed]**, a capacity of each of the searched blocks **[Column 15, Lines 48 – 60, Searching for a block with enough free memory to store data is determining a number of clusters in a block that can store data]**, a number of used space of each of the searched blocks **[Column 15, Lines 48 – 60, Searching for a block with enough space to store data indicates the number of used and unused clusters in the block are determined to see if there are enough unused or free clusters in a block to store data]**, and a size of each of the searched blocks **[Column 15, Lines 48 – 60, Searching the blocks for enough space to store data indicates the size of clusters in the blocks are searched and then used in a mathematical equation to**

determine the total amount of used and unused space in the block and the memory as a whole].

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Wells in AAPA, because it increases data coherency **[Column 35, Lines 60 - 67; Column 36, Lines 1 - 4]**.

However, AAPA in view of Wells does not specifically disclose the limitation of valid free area manager that manages information for the memory containing at least a predetermined threshold number of unused clusters and using the information in the valid free area manager when writing data to memory.

Stoppani discloses valid free area manager **["free space table", Column 6, Lines 25 – 28]** that manages information for the memory containing at least a predetermined threshold number of unused clusters **[Column 6, Lines 25 – 43]** and using the information in the valid free area manager **["free space table", Column 6, Lines 25 – 28]** when writing data to memory **[Column 6, Lines 44 – 47]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Stoppani in AAPA in view of Wells, because it ensures that sufficient available space is present on storage device to store additional files **[Column 6, Lines 44 – 47]** and it provides a method for Wells to perform the searching and determining of a valid block.

With regard to **claim 7**, AAPA teaches memory is divided into blocks and then subdivided into smaller clusters **[Specification, Page 2, Lines 14 – 18, This shows the blocks memory is divided into a number of clusters]**.

Stoppani discloses the valid free area manager **["free space table", Column 6, Lines 25 – 28]** holds a valid free list which is list information **[Column 6, Lines 25 - 31]** related to the valid block which is one of the blocks including at least the predetermined threshold number or unused clusters **[Column 6, Lines 25 – 43, This shows the linked list contains which clusters are free and which are not in the blocks of AAPA]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Stoppani in AAPA in view of Wells, because it ensures that sufficient available space is present on storage device to store additional files **[Column 6, Lines 44 – 47]** and it provides a method for Wells to perform the searching and determining of a valid block.

With regard to **claim 9**, AAPA teaches a block of storage is divided into smaller clusters **[Specification, Page 2, Lines 1 - 13]**.

Wells discloses the predetermined threshold number of free space is a value at least one-half of the amount of memory in each block **[Column 15, Lines 48 – 60; Column 18, Lines 44 – 67; Column 19, Lines 1 – 22, This shows the search and determination of free memory in a block is based on the amount of data that is to be written in the memory. At times the data to be written will be equal to the storage in at least one-half of the number of clusters in each block and at other times it will be less then one-half of the number of clusters in each block. There is no limitation that the predetermined number is always a value at least one-half of the number of clusters included in each block]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Wells in AAPA, because it increases data coherency **[Column 35, Lines 60 - 67; Column 36, Lines 1 - 4]**.

Stoppani discloses deciding memory space based on a number of unused clusters **[Column 6, Lines 25 – 43]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Stoppani in AAPA in view of Wells, because it ensures that sufficient available space is present on storage device to store additional files **[Column 6, Lines 44 – 47]** and it provides a method for Wells to perform the searching and determining of a valid block.

With regard to **claim 14**, Wells discloses wherein the predetermined minimum speed is the speed necessary for real-time recording of the data **[Column 15, Line 48 through Column 22, Line 22, This shows writing data when there is a request to write data showing that the data is written in real-time when the request is received]**.

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Wells in AAPA, because it increases data coherency **[Column 35, Lines 60 - 67; Column 36, Lines 1 - 4]**.

With regard to **claim 15**, Wells discloses wherein the predetermined minimum speed is the speed necessary for real-time recording of the data **[Column 15, Line 48 through Column 22, Line 22, This shows writing data when there is a request to**

write data showing that the data is written in real-time when the request is received].

It would have been obvious to someone of ordinary skill in the art at the time of the invention to use the teachings of Wells in AAPA, because it increases data coherency **[Column 35, Lines 60 - 67; Column 36, Lines 1 - 4]**.

With regard to **claim 16**, Wells discloses the information includes a class of the information recording medium **[Column 16, Line 15 through Column 17, Line 3, The different warning levels indicate a current class of the information recording medium. The "FLASH Warn 1" and "FLASH Warn 2" state indicates the memory is a class of memory that currently has enough reserves to write data at a minimum speed to store data. The "standby" state indicates the memory is currently a class of memory that does not have enough reserves and data is not written at a minimum speed]**.

With regard to **claim 17**, AAPA discloses the recording area of the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]** is managed in units of blocks **[Specification, Page 2, Lines 8 – 9]**, and each of the blocks includes at least two clusters as units for storing data for the file system **[Specification, Page 2, Lines 14 – 18, This shows the blocks memory is divided into a number of clusters that are between 1 - N where N is an integer. The limitation of two clusters is included in the range of 1 - N clusters since two is an integer]**.

Wells discloses the information includes a capacity of each of the searched blocks **[Column 15, Lines 48 – 60, Searching for a block with enough free memory to store data is determining a number of clusters in a block that can store data]**.

With regard to **claim 18**, AAPA discloses the recording area of the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]** is managed in units of blocks **[Specification, Page 2, Lines 8 – 9]**, and each of the blocks includes at least two clusters as units for storing data for the file system **[Specification, Page 2, Lines 14 – 18, This shows the blocks memory is divided into a number of clusters that are between 1 - N where N is an integer. The limitation of two clusters is included in the range of 1 - N clusters since two is an integer]**.

Wells discloses the information includes a number of used space of each of the searched blocks **[Column 15, Lines 48 – 60, Searching for a block with enough space to store data indicates the number of used and unused clusters in the block are determined to see if there are enough unused or free clusters in a block to store data]**.

Stoppani discloses a number of unused clusters **[Column 6, Lines 25 – 43]**.

With regard to **claim 19**, Wells discloses the information includes a size of the searched blocks **[Column 15, Lines 48 – 60, Searching the blocks for enough space to store data indicates the size of clusters in the blocks are searched and then used in a mathematical equation to determine the total amount of used and unused space in the block and the memory as a whole]**.

With regard to **claim 20**, AAPA discloses a recording area of the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]** is managed in units of blocks **[Specification, Page 2, Lines 8 – 9]**, and each of the blocks includes at least two clusters as units for storing data for the file system **[Specification, Page 2, Lines 14 – 18, This shows the blocks memory is divided into a number of clusters that are between 1 - N where N is an integer. The limitation of two clusters is included in the range of 1 - N clusters since two is an integer]**.

Wells discloses writing the data in a searched area of memory having less than the predetermined threshold of unused space when none of the searched areas of memory are determined to be the valid block **[Column 16, Lines 15 – 59, This shows searching the memory to see if the amount of free space in a memory is past a predetermined threshold, such as 19 units of free space. If there are more then 19 then the data is stored normally. If there are less then 19 the data can still be stored as long as there are at least 11 units of free space which is a new threshold value]**.

Stoppani discloses a number of unused clusters **[Column 6, Lines 25 – 43]**.

With regard to **claim 21**, Wells discloses the information includes a class of the information recording medium **[Column 16, Line 15 through Column 17, Line 3, The different warning levels indicate a current class of the information recording medium. The "FLASH Warn 1" and "FLASH Warn 2" state indicates the memory is a class of memory that currently has enough reserves to write data at a minimum speed to store data. The "standby" state indicates the memory is**

currently a class of memory that does not have enough reserves and data is not written at a minimum speed].

With regard to **claim 22**, AAPA discloses the recording area of the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]** is managed in units of blocks **[Specification, Page 2, Lines 8 – 9]**, and each of the blocks includes at least two clusters as units for storing data for the file system **[Specification, Page 2, Lines 14 – 18, This shows the blocks memory is divided into a number of clusters that are between 1 - N where N is an integer. The limitation of two clusters is included in the range of 1 - N clusters since two is an integer]**.

Wells discloses the information includes a capacity of each of the searched blocks **[Column 15, Lines 48 – 60, Searching for a block with enough free memory to store data is determining a number of clusters in a block that can store data]**.

With regard to **claim 23**, AAPA discloses the recording area of the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]** is managed in units of blocks **[Specification, Page 2, Lines 8 – 9]**, and each of the blocks includes at least two clusters as units for storing data for the file system **[Specification, Page 2, Lines 14 – 18, This shows the blocks memory is divided into a number of clusters that are between 1 - N where N is an integer. The limitation of two clusters is included in the range of 1 - N clusters since two is an integer]**.

Wells discloses the information includes a number of used space of each of the searched blocks **[Column 15, Lines 48 – 60, Searching for a block with enough space to store data indicates the number of used and unused clusters in the**

block are determined to see if there are enough unused or free clusters in a block to store data].

Stoppani discloses a number of unused clusters **[Column 6, Lines 25 – 43]**.

With regard to **claim 24**, Wells discloses the information includes a size of the searched blocks **[Column 15, Lines 48 – 60, Searching the blocks for enough space to store data indicates the size of clusters in the blocks are searched and then used in a mathematical equation to determine the total amount of used and unused space in the block and the memory as a whole]**.

With regard to **claim 25**, AAPA discloses a data processor **[Specification, Pages 1 – 2, The Applicant discloses writing data to a memory device which implies there is an data processing apparatus such as a data processor]**, a recording area of the information recording medium **[Specification, Page 1, Lines 15 – 19 and 23 – 25]** is managed in units of blocks **[Specification, Page 2, Lines 8 – 9]**, and each of the blocks includes at least two clusters as units for storing data for the file system **[Specification, Page 2, Lines 14 – 18, This shows the blocks memory is divided into a number of clusters that are between 1 - N where N is an integer. The limitation of two clusters is included in the range of 1 - N clusters since two is an integer]**.

Wells discloses writing the data in a searched area of memory having less than the predetermined threshold of unused space when none of the searched areas of memory are determined to be the valid block **[Column 16, Lines 15 – 59, This shows searching the memory to see if the amount of free space in a memory is past a**

predetermined threshold, such as 19 units of free space. If there are more then 19 then the data is stored normally. If there are less then 19 the data can still be stored as long as there are at least 11 units of free space which is a new threshold value].

Stoppani discloses a number of unused clusters **[Column 6, Lines 25 – 43]**.

Response to Amendment/Arguments

8. Applicant's arguments filed 05/20/2011 have been fully considered but they are not persuasive.

The Applicant argues on pages 9 – 15 with regard to claims 1 – 3, 5 – 7, 9, and 14 – 25 that the amendments to the independent claims and added new claims contain limitations that the Examiner had indicated allowable in a previous interview summary and therefore are allowable over the prior art applied to the claims. After careful consideration of the Applicant's arguments the Examiner respectfully disagrees. As indicated above in the rejections of base claims 1 and 6 along with the rejections of new claims 16 – 25 the prior art reads on the amended claim limitations which are the same in new claims 16 - 25. The Examiner indicated during the interview that the proposed amendments would appear to overcome the prior art the time of the interview. However, the amendments to the claims change the scope of the claims requiring a proper search and consideration of the prior art. During an interview a proper search and consideration is not possible and there is no guarantee that the claims proposed during the interview are the exact claims submitted for review. After a proper search

and consideration of the prior art the Examiner has shown how AAPA, Wells, and Stoppani read on the new amendments in the base claims which as included individually in new claims 16 – 25.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Walsh et al. (Pat 6,202,121) discloses storing data in free clusters that are not contiguous **[Column 12, Lines 9 - 19]**.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Direction of Future Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER D. BIRKHIMER whose telephone number is (571)270-1178. The examiner can normally be reached on M-H 7:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher D Birkhimer
Examiner
Art Unit 2186

/Christopher D Birkhimer/
Examiner, Art Unit 2186

/Pierre-Michel Bataille/
Primary Examiner, Art Unit 2186